AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for forming an ad-hoc network between vehicles to communicate vehicle management information between them, comprising the steps of:

collecting, by a source vehicle, its own vehicle driving information, and creating vehicle management information of the source vehicle based on the vehicle driving information;

setting up, by the source vehicle, a routing condition and a message reception condition composed of predetermined vehicle traveling requirements based on the vehicle management information, and transmitting a vehicle management information message having the routing condition, the message reception condition and the vehicle management information to nearby vehicles;

searching, by the nearby vehicles, for the routing condition and the message reception condition upon receiving the vehicle management information message; and

determining whether the nearby vehicles route the vehicle management information message to another nearby vehicle according towhen the vehicle driving information of the nearby vehicles satisfies the routing condition; and

determining whether the nearby vehicles store the vehicle driving information after detecting vehicle driving information included in the vehicle management information message when the vehicle driving information satisfies the routing condition.

2. (Original) The method as set forth in claim 1, wherein the routing condition is contained in a header of the vehicle management information message, and the vehicle management information of the source vehicle is contained in a main body of the vehicle management information message.

3. (Original) The method as set forth in claim 2,

wherein the step for searching the routing condition includes the steps of:

searching, by the nearby vehicles, for the routing condition upon receiving header information of the vehicle management information message; and

comparing, with the nearby vehicles, their vehicle driving information with the vehicle traveling requirements contained in the routing condition.

4. (Original) The method as set forth in claim 3,

wherein, in the collecting step, the step of creating vehicle management information includes the steps of

creating, with the source vehicle, vehicle safety information based on its own vehicle driving information and the vehicle driving information of the nearby vehicles, and including at least one of position and direction of the source vehicle in the vehicle driving information; and

creating the vehicle management information using at least one of the vehicle driving information and the vehicle safety information of the source vehicle.

5. (Original) The method as set forth in claim 4,

wherein the vehicle safety information includes

a first warning message indicating an imminent traffic collision between vehicles,

a second warning message indicating a traffic accident occurrence, and

a third warning message indicating the entrance of the source vehicle to a crossroads.

6. (Currently Amended) The method as set forth in claim 3,

wherein the source vehicle sets up a the message reception condition to allow only vehicles satisfying a prescribed vehicle traveling requirement from among the predetermined vehicle traveling requirements to receive the vehicle management information message, includes the message reception condition in the routing condition, and then transmits the message.

7. (Original) The method as set forth in claim 6,

wherein the vehicle traveling requirement includes at least one of vehicle position, speed, and direction information.

8. (Original) The method as set forth in claim 6,

wherein the vehicle management information message is transmitted to a driver if the nearby vehicles are compatible with the message reception condition.

9. (Original) The method as set forth in claim 7,

wherein the routing condition further includes ID (Identification) and routing area information of a routing vehicle, and the message reception condition further includes ID information of a destination vehicle.

10. (Original) The method as set forth in claim 9,

wherein the source vehicle sets each of the routing vehicle ID and the destination vehicle ID to a null value, and broadcasts the vehicle management information message to the nearby vehicles.

11. (Original) The method as set forth in claim 10,

wherein the source vehicle sets the routing area to a predetermined area, sets vehicle position information contained in the vehicle traveling requirement of the message reception condition to a reference position of the routing area, and broadcasts the vehicle management information message to nearby vehicles contained in the predetermined area.

12. (Original) The method as set forth in claim 9,

wherein the source vehicle sets the destination vehicle ID to a specified vehicle, sets the routing vehicle ID to an ID of the specified vehicle based on the vehicle driving information of the specified vehicle, and transmits the vehicle management information message to the specified vehicle.

13. (Original) The method as set forth in claim 12,

wherein the source vehicle sets up a plurality of routing vehicle IDs, and transmits the vehicle management information message to the specified vehicle using a flooding method.

14. (Currently Amended) An apparatus for forming an ad-hoc network between a source vehicle and nearby vehicles to communicate vehicle management information between them, the apparatus comprising:

a sensor for collecting vehicle driving information including at least one of vehicle position, direction, and speed information of the source vehicle;

a communicator for receiving a vehicle management information message having vehicle management information, and-a routing condition and a message reception condition of nearby vehicles from the nearby vehicles, for inserting a predetermined vehicle traveling requirement into the routing condition and the message reception condition, for comparing the vehicle traveling requirement with the collected vehicle driving information, and for determining whether the vehicle management information message is routed to another vehicle when the vehicle driving information of the nearby vehicles satisfies the routing condition; and

a display for informing a driver of the collected vehicle driving information; and

a controller for determining whether the nearby vehicles store the vehicle driving information after detecting vehicle driving information included in the vehicle management information message when the vehicle driving information satisfies the routing condition.

15. (Original) The apparatus as set forth in claim 14,

wherein the routing condition is contained in a header of the vehicle management information message, and the vehicle management information is contained in a main body of the vehicle management information message.

16. (Original) The apparatus as set forth in claim 14,

wherein the vehicle traveling requirement includes at least one of vehicle position, speed, and direction information.

17. (Cancelled)

18. (Currently Amended) The apparatus as set forth in .claim 14[[17]], further comprisingwherein:

a-the controller for receivesing the vehicle management information message from the communicator if the communicator determines that the vehicle driving information is compatible with the vehicle traveling requirements defined in the message reception condition.

19. (Currently Amended) An apparatus for forming an ad-hoc network between a source vehicle and nearby vehicles to communicate vehicle management information between them, the apparatus comprising:

a sensor for collecting vehicle driving information including at least one of vehicle position, direction, and speed information of the source vehicle;

a communicator for receiving vehicle driving information of nearby vehicles;

a controller for creating vehicle management information based on individual vehicle driving information of the source vehicle and the nearby vehicles, for setting up a predetermined routing condition and a message reception condition for routing the vehicle management information, for inserting a predetermined vehicle traveling requirement into the routing condition and the message reception condition, and for creating a vehicle management information message having the routing condition, the message reception condition and the vehicle management information; and

a display for informing a driver of the vehicle driving information of the source vehicle and the vehicle management information,

wherein the controller further determines whether the nearby vehicles store the vehicle driving information after detecting vehicle driving information included in the vehicle management information message when the vehicle driving information satisfies the routing condition.

20. (Original) The apparatus as set forth in claim 19,

wherein the routing condition is contained in a header of the vehicle management information message, and the vehicle management information of the source vehicle is contained in a main body of the vehicle management information message.

21. (Original) The apparatus as set forth in claim 19,

wherein the controller creates vehicle safety information upon receiving the vehicle driving information of the source vehicle and the nearby vehicles, and creates the vehicle management information using at least one of the vehicle driving information and the vehicle safety information of the source vehicle.

22. (Original) The apparatus as set forth in claim 21,

wherein the vehicle safety information includes

a first warning message indicating an imminent traffic collision between vehicles,

a second warning message indicating a traffic accident occurrence, and

a third warning message indicating the entrance of the source vehicle to a crossroads.

23. (Currently Amended) The apparatus as set forth in claim 20,

wherein the source vehicle sets up a-the message reception condition to allow only vehicles satisfying the predetermined vehicle traveling requirement to receive the vehicle management information message, includes the message reception condition in the routing condition, and then transmits the message.

24. (Original) The apparatus as set forth in claim 23,

wherein the vehicle traveling requirement includes at least one of vehicle position, speed, and direction information.

25. (Original) The apparatus as set forth in claim 24,

wherein the routing condition further includes ID (Identification) and routing area information of a routing vehicle, and the message reception condition further includes ID information of a destination vehicle.

26. (Original) The apparatus as set forth in claim 25,

wherein the source vehicle sets each of the routing vehicle ID and the destination vehicle ID to a null value, and broadcasts the vehicle management information message to the nearby vehicles.

27. (Original) The apparatus as set forth in claim 26,

wherein the source vehicle sets the routing area to a predetermined area, sets vehicle position information contained in the vehicle traveling requirement of the message reception condition to a reference point of the routing area, and broadcasts the vehicle management information message to nearby vehicles contained in the predetermined area.

28. (Original) The apparatus as set forth in claim 25,

wherein the source vehicle sets the destination vehicle ID to a specified vehicle, sets the routing vehicle ID to an ID of the specified vehicle to based on the vehicle driving information of the specified vehicle, and transmits the vehicle management information message to the specified vehicle.

29. (Original) The apparatus as set forth in claim 25,

wherein the source vehicle sets the destination vehicle ID to a specified vehicle, sets up a plurality of routing vehicle IDs, and transmits the vehicle management information message to the specified vehicle using a flooding method.

30. (Currently Amended) A method for forming an ad-hoc network between a source vehicle and nearby vehicles to communicate vehicle management information between them comprising the steps of:

collecting vehicle driving information including at least one of vehicle position, direction, and speed information of the source vehicle;

receiving vehicle management information message having vehicle management information, a message reception condition and a routing condition of nearby vehicles from the nearby vehicles, inserting a predetermined vehicle traveling requirement into the routing condition and the message reception condition, comparing the vehicle traveling requirement with the collected vehicle driving information, and determining whether the vehicle management information message is routed to another vehicle when the vehicle driving information of the nearby vehicles satisfies the routing condition; and

informing a driver of the vehicle driving information of the source vehicle.

31. (Original) The method as set forth in claim 30,

wherein the routing condition is contained in a header of the vehicle management information message, and the vehicle management information is contained in a main body of the vehicle management information message.

32. (Original) The method as set forth in claim 30,

wherein the vehicle traveling requirement includes at least one of vehicle position, speed, and direction information.

33. (Cancelled)

34. (Currently Amended) The method as set forth in claim 30[[33]],

wherein the vehicle management information message is transmitted to a driver if the source vehicle determines that the vehicle driving information is compatible with the vehicle traveling requirement defined in the message reception condition.

35. (Currently Amended) A method for forming an ad-hoc network between a source vehicle and nearby vehicles to communicate vehicle management information between them comprising the steps of:

collecting vehicle driving information including at least one of vehicle position, direction, and speed information of the source vehicle;

receiving vehicle driving information of nearby vehicles from the nearby vehicles;

creating vehicle management information based on the vehicle driving information of the source vehicle and the nearby vehicles, setting up a routing condition and a message reception condition for routing the vehicle management information, inserting a predetermined vehicle traveling requirement into the routing condition and the message reception condition, and creating a vehicle management information message having the routing condition, the message reception condition and the vehicle management information; and

informing a driver of the vehicle driving information and the vehicle management information of the source vehicle.

36. (Original) The method as set forth in claim 35,

wherein the routing condition is contained in a header of the vehicle management information message, and the vehicle management information of the source vehicle is contained in a main body of the vehicle management information message.

37. (Original) The method as set forth in claim 35,

wherein the source vehicle creates vehicle safety information based on its own vehicle driving information and vehicle driving information of the nearby vehicles, and the vehicle management information is created using at least one of the vehicle driving information and the vehicle safety information of the source vehicle.

38. (Original) The method as set forth in claim 37,

wherein the vehicle safety information includes

a first warning message indicating an imminent traffic collision between vehicles,

a second warning message indicating a traffic accident occurrence, and

a third warning message indicating the entrance of the source vehicle to a crossroads.

39. (Currently Amended) The method as set forth in claim 36,

wherein the source vehicle sets up a-the message reception condition to allow only vehicles satisfying the predetermined vehicle traveling requirement to receive the vehicle management information message, includes the message reception condition in the routing condition, and then transmits the message.

40. (Original) The method as set forth in claim 39,

wherein the vehicle traveling requirement includes at least one of vehicle position, speed, and direction information.

41. (Original) The method as set forth in claim 40,

wherein the routing condition further includes ID (Identification) and routing area information of a routing vehicle, and the message reception condition further includes ID information of a destination vehicle.

42. (Original) The method as set forth in claim 41,

wherein the source vehicle sets each of the routing vehicle ID and the destination vehicle ID to a null value, and broadcasts the vehicle management information message to the nearby vehicles.

43. (Original) The method as set forth in claim 42,

wherein the source vehicle sets the routing area to a predetermined area, sets vehicle position information contained in the vehicle traveling requirement of the message reception condition to a reference point of the routing area, and broadcasts the vehicle management information message to nearby vehicles contained in the predetermined area.

44. (Original) The method as set forth in claim 41,

wherein the source vehicle sets the destination vehicle ID to a specified vehicle, sets the routing vehicle ID to an ID of the specified vehicle to based on the vehicle driving information of the specified vehicle, and transmits the vehicle management information message to the specified vehicle.

45. (Original) The method as set forth in claim 41,

wherein the source vehicle sets the destination vehicle ID to the specified vehicle, sets up a plurality of routing vehicle IDs, and transmits the vehicle management information message to the specified vehicle using a flooding method.

46. (Original) The method as set forth in one of claims 4, 30 and 35,

wherein the vehicle driving information includes information indicating a traffic accident occurrence of the source vehicle.

47. (Original) The apparatus as set forth in one of claims 14 and 19,

wherein the vehicle driving information includes information indicating a traffic accident occurrence of the source vehicle.